

**DEPARTMENT OF CONSUMER AND INDUSTRY SERVICES
DIRECTOR'S OFFICE
OCCUPATIONAL HEALTH STANDARDS**

Filed with the Secretary of State on January 1, 1975 **(as amended October 22, 1999)**

This rule takes effect 15 days after filing with the Secretary of State

(By authority conferred on the director of the department of consumer and industry services by section 24 of 1974 PA 154, M.C.L. 408.1024, and Executive Reorganization Orders Nos. 1996-1 and 1996-2, M.C.L. 330.3101 and 445.2001)

R 3303 is amended as follows:

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Rule 3301 Replaced by Permit-Required Confined Spaces, R 325.63001 et seq. (10/99).

Rule 3302 Rescinded (11/00).

Rule 3303 Specific Operations and Special Industries

(1) Entry of open surface tanks.

(a) This subsection applies to all tanks subject to Rule 3220.

(b) Before cleaning the interior of any tank, the contents shall be drained off, and the cleanout doors shall be opened where provided. All pockets in tanks or pits, where it is possible for hazardous vapors to collect, shall be ventilated and cleared of such vapors. [1910.94(d)(11)(ii)]

(c) Tanks which have been drained to permit employees to enter for the purpose of cleaning, inspection, or maintenance may contain atmospheres which are hazardous to life or health, through the presence of flammable or toxic air contaminants, or through the absence of sufficient oxygen. Before employees shall be permitted to enter any such tank, appropriate tests of the atmosphere shall be made to determine if the limits set by Rule 3220(2)(c) are exceeded, or if the oxygen concentration is less than 19.5 percent. [1910.94(d)(11)(iii)]

(d) If the tests made in accordance with paragraph (c) of this subsection indicates that the atmosphere in the tank is unsafe, before any employee is permitted to enter the tank, the tank shall be ventilated until the hazardous atmosphere is removed, and ventilation shall be continued so as to prevent the occurrence of a hazardous atmosphere as long as an employee is in the tank. [1910.94(d)(11)(iv)]

(e) If, in emergencies, such as rescue work, it is necessary to enter a tank which may contain a hazardous atmosphere, suitable respirators, such as self-contained breathing apparatus; hose mask with blower, if there is a possibility of oxygen deficiency; or a gas mask, selected and operated in accordance with paragraph (f) of this subsection, shall be used. If a contaminant in the tank can cause dermatitis, or be absorbed through the skin,

the employee entering the tank shall also wear protective clothing. At least one trained standby employee, with suitable respirator, shall be present in the nearest uncontaminated area. The standby employee must be able to communicate with the employee in the tank and be able to haul him out of the tank with a lifeline if necessary. [1910.94(d)(11)(v)]

(f) When, during emergencies as described in paragraph (e) of this subsection, workers must be in areas where concentrations of air contaminants are greater than the limit set by Rule 3220(2)(c), or oxygen concentrations are less than 19.5 percent, they shall be required to wear respirators adequate to reduce their exposure to a level below these limits, or to provide adequate oxygen. Such respirators shall also be provided in marked, quickly accessible storage compartments built for the purpose, when there exists the possibility of accidental release of hazardous concentration of air contaminants. Respirators shall be approved by the U.S. Bureau of Mines, U.S. Department of the Interior and shall be selected by a competent industrial hygienist or other technically qualified source. Respirators shall be used in accordance with Rules 3302, 3501 and 3502 and persons who may require them shall be trained in their use. [1910.94(d)(9)(vi)]

(2) Welding in confined spaces.

(a) Removed (10/99).

(b) Removed (10/99).

(c) Lifelines. Where a welder must enter a confined space through a manhole or other small opening, means shall be provided for quickly removing him in case of emergency. When safety belts and lifelines are used for this purpose they shall be so attached to the welder's body that his body cannot be jammed in a small exit opening. An attendant with a preplanned rescue procedure shall be stationed outside to observe the welder at all times and be capable of putting rescue operations into effect. [1910.252(e)(4)(iv)]

(3) Vessel Entry in Pulp, Paper and Paperboard Mills.

(a) This subsection applies to establishments subject to Rule 5001.

(b) Safety practices - vessel entering. Lifelines and safety harness shall be worn by anyone entering closed vessels, tanks, chip bins, and similar equipment, and a

person shall be stationed outside in a position to handle the line and to summon assistance in case of emergency. The air in the vessels shall be tested for oxygen deficiency and the presence of both toxic and explosive gases and vapors, before entry into closed vessels, tanks, etc., is permitted. Self-contained air- or oxygen-supply masks shall be readily available in case of emergency. Work shall not be done on equipment under conditions where an injury would result if a valve were unexpectedly opened or closed unless the valve has been locked in a safe position. [1910.261(b)(5)]

(c) Rag and old paper preparation - entering cookers.

(i) When cleaning, inspection, or other work requires that persons must enter the cooker, one person shall be stationed outside in a position to observe and assist in case of emergency, in accordance with paragraph (b) of this subsection. [1910.261(f)(6)(ii)]

(ii) Supplied-air respirators should be worn by persons when spreading material inside cookers. [1910.261(f)(6)(iii)]

(d) Chemical processes of making pulp - acid tower entry.

(i) During inspection, repairs, or maintenance of acid towers, the workman shall be provided with eye protection, a supplied-air respirator, a safety belt, and an attached lifeline. The line shall be extended to an attendant stationed outside the tower opening. [1910.261(g)(2)(iii)]

(ii) Tanks (acid).

(A) Tanks shall be free of acid and shall be washed out with water, and fresh air shall be blown into them before allowing men to enter. Men entering the tanks shall be provided with supplied-air respirators, lifebelts, and attached lifelines. [1910.261(g)(4)(i)]

(B) A man shall be stationed outside to summon assistance if necessary. All intake valves to a tank shall be blanked off or disconnected. [1910.261(g)(4)(ii)]

(iii) Lead burning. When lead burning is being done within tanks, fresh air shall be forced into the tanks so that fresh air will reach the face of the worker first and the direction of the current will never be from the source of the fumes toward the face of the workers. Supplied-air respirators (constant-flow type) shall be provided. [1910.261(g)(6)]

(iv) Inspecting and repairing digester.

(A) Fresh air shall be blown into the digester constantly while workmen are inside. Supplied-air respirators shall be available in the event the fresh-air supply fails or is inadequate. [1910.261(g)(15)(ii)]

(B) No inspector shall enter a digester unless a lifeline is securely fastened to his body by means of a safety belt and at least one other experienced employee is stationed outside the digester to handle the line and to summon assistance. All ladders and lifelines shall be inspected before each use. [1910.261(g)(15)(iii)]

(C) All employees entering digesters for inspection or repair work shall be provided with protective headgear.

Eye protection and dust masks shall be provided to workmen while the old brick lining is being removed, in accordance with American National Standards Z87.1-1968, Z88.2-1969, and Z89.1-1969. [1910.261(g)(15)(v)]

(v) Miscellaneous. Insofar as the processes of the sulfate and soda operations are similar to those of the sulfite processes, the standard of subparagraph (i) to (iv) of this paragraph (d) shall apply. [1910.261(g)(18)]

(e) Stock preparation - pulpers.

(i) When cleaning, inspecting, or other work requires that persons enter the pulpers, they shall be equipped with safety belt and lifeline, and one person shall be stationed outside at a position to observe and assist in case of emergency. [1910.261(j)(5)(ii)]

(ii) When cleaning, inspecting, or other work requires that persons enter pulpers, all steam, water, or other control devices shall be locked or tagged out. Blank flanging and tagging of pipe lines is acceptable in place of closed and locked or tagged valves. Blank flanging of steam and water lines shall be acceptable in place of valve locks. [1910.261(j)(5)(iii)]

Rule 3304 Extinguishing Systems

(1) Inert gas or foam extinguishing systems. If an inert gas, as defined in Rule 2101(1)(d), or foam system is provided in an occupied area for the prevention or extinguishment of fire or explosion, the affected area shall be conspicuously posted to call attention to the potential creation of a non-respirable atmosphere. Provision shall be made for the actuating of an audible and visible alarm before the system is activated; the system shall incorporate a sufficient time-delay to permit the egress of any persons within the affected area. After the activation of the system, an audible and visible warning that a non-respirable atmosphere, as defined in Rule 3301(1)(b), has been created within the area shall continue until the non-respirable atmosphere has been purged or diluted with air to safe breathing levels. [R 325.2431]

(2) Fixed dry-chemical extinguishing systems. Where there is a possibility that personnel may be exposed to a dry-chemical discharge, suitable safeguards shall be provided to insure prompt evacuation of such locations, and also to provide means for prompt rescue of any trapped personnel. [1910.160(a)(2)]

(3) Carbon dioxide extinguishing systems. In any use of carbon dioxide where there is a possibility that employees may be trapped in, or enter into atmospheres made hazardous by a carbon dioxide discharge, suitable safeguards shall be provided to insure prompt evacuation of and to prevent entry into such atmospheres and also to provide means for prompt rescue of any trapped personnel. Such safety items as personnel training, warning signs, discharge alarms, predischage alarms, and breathing apparatus shall be considered. [1910.161(a)(2)]